CHAPTER 8

ESTABLISHING HAZARD PREVENTION AND CONTROL PROGRAM

INTRODUCTION

You have conducted a comprehensive survey of your workplace to uncover existing and potential hazards. Now what are you going to do about them? The Occupational Safety and Health Act of 1970 requires that each employer "furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm..." (29 U.S.C. 651, Sec. 5(a)(1).

In this chapter, we will discuss the management systems used to prevent and control hazards. These include: control by engineering, safe work practices, personal protective equipment (PPE) and administrative arrangements; systems to track hazard correction; preventive maintenance systems; emergency preparation; and medical programs.

The goal of the hazard prevention and control program is to foolproof the workplace and its operations, to the extent feasible, to keep employees from being harmed. It is an ongoing program, one that is never finished. You will design and implement and then revise and improve preventive measures and controls as your worksite changes and as your store of hazard information grows.

The most frequent sources for updating hazard information are routine general inspections, employee reports of hazards and accident/incident investigations. (See Chapter 9). Other good sources for hazard information updates are the ongoing job hazard analyses, process hazard analyses, and periodic comprehensive hazard surveys. (See Chapter 7.)

THE TERMINOLOGY OF HAZARD CONTROL

Hazards take many forms: air contaminants, tasks involving repetitive motions, equipment with moving parts or openings that can catch body parts of clothing, microorganisms, extreme heat or cold, noise, toxic liquids, and more. The terms we use here to describe the principles of engineering control may sound a little strange when applied to some of these hazards. You may find that others will use the terms somewhat differently. There should be agreement, however, about the concepts the terms describe.

ENGINEERING CONTROLS

To the extent feasible, the work environment and the job itself should be designed to eliminate or reduce exposure to hazards. This approach is called engineering control, but it does not necessarily mean that an engineer is required to design the control. Engineering controls can be very simple in some cases. They are based on the following broad principles:

- If feasible, design the facility, equipment or process to remove the hazards and/or substitute something that is not hazardous or is less hazardous;
- If removal is not feasible, enclose the hazard to prevent exposure in normal operations; and
- Where complete enclosure is not feasible, establish barriers or local ventilation to reduce exposure to the hazard in normal operations.

<u>Elimination of Hazards through Design</u>. Designing facilities, equipment or processes so that the hazard is not longer even potentially present is obviously the best worker protection. Some examples of this are:

- Redesigning, changing or substituting equipment to remove the source of excessive temperatures, noise or pressure;
- Redesigning a process to use less toxic chemicals;
- Redesigning a work station to relive physical stress and remove ergonomic hazards; or
- Designing general ventilation with sufficient fresh outdoor air to improve indoor air quality

and generally to provide a safe, healthful atmosphere.

Enclosure of Hazards. When you cannot remove a hazard and cannot replace it with a less hazardous alternative the next best control is enclosure. Enclosing a hazard usually means that there is no hazard exposure to workers during normal operations. There still will be potential exposure to workers during maintenance operations or if the enclosure system breaks down. For those situations, additional controls such as work practices or personal protective equipment (PPE) may be necessary to control exposure.

Some examples of enclosure designs are:

- Complete enclosure of moving parts of machinery;
- Complete containment of toxic liquids or gasses from the beginning of the process using or producing them to detoxification, safe packing for shipment, or safe disposal of toxic waste products;
- Glove box operations to enclose work with dangerous microorganisms, radioisotopes or toxic substances; and
- Complete containment of noise, heat or pressure-producing processes with materials especially designed for those purposes.

Barriers or Local Ventilation. When the potential hazard cannot be removed, replaced or enclosed, the next best approach is a barrier to exposure, or in the case of air contaminants, local exhaust ventilation to remove the contaminant from the workplace. This engineered control involves potential exposure to the worker even in normal operations. Consequently, it should be used only in conjunction with other types of controls, such as safe work practices designed specifically for the site condition and/or PPE. Examples include:

- Ventilation hoods in laboratory work;
- Machine guarding, including electronic barriers;
- Isolation of a process in an area away from workers, except for maintenance work;
- Baffles used as noise-absorbing barriers; and
- Nuclear radiation or heat shields.

GENERAL WORKPLACE RULES AND SAFE WORK PRACTICES

Many of your organization's general workplace rules have a bearing on safety and health. It is accurate to think of these rules as hazard controls.

In addition to the general workplace rules that apply to everyone, specific work practices may be needed to safeguard your employees in a variety of situations.

For example, even when a hazard is enclosed, there still will be times when exposure can occur: when maintenance is necessary, when the enclosure system suffers a partial or complete breakdown, or when enclosure does not fully control the hazard. By following established safety work practices for accomplishing a task safely (and using PPE in many cases), your employees can further reduce their exposure to hazard.

Workplace Rules. The safety and health rules that you develop and make part of your overall workplace rules are an important component of your hazard prevention and control program. These rules play a major part in identifying acceptable and unacceptable behavior. For example, you may have rules outlawing horseplay or violent behavior on company properly, or requiring your employees to wear personal protective equipment.

Safety and health rules are most effective when they are written, posted, given to all affected employees and discussed with them. Many employers emphasize the link between safety and health rules and the consequences of breaking them by reviewing the rules with their employees. They then ask the employees to sign a statement at the bottom of the list: "I have read the rules, I understand them, and I have received an explanation of the consequences of breaking them." Employer and employee both keep a copy of this signed statement.

Some employers ask their employees to help develop the workplace rules and then to help revise them as needed. When employees play a role in formulating the rules they are more likely to understand and follow them.

For more examples of workplace safety and health rules and guidance in developing them, see Appendix 8-3.

Safe Work Practices. Some of these practices are very general in their applicability. They include housekeeping activities such as removal of tripping, blocking, and slipping hazards; removal of accumulated toxic dust on surfaces; and wetting down surfaces to keep toxic dust out of the air.

Other safe work practices apply to specific jobs in the workplace and involve specific procedures for accomplishing a job. It is necessary to conduct a job hazard analysis to develop these procedures.

WiSCon recommends that the written analysis of a job be kept separate from the written procedures your workers will follow to accomplish the job safely. A good job hazard analysis is more detailed than a good work instruction sheet. Each document suffers from being combined with the other.

You may decide that a training program is needed, using the job hazard analysis as the basis for training your workers in the new procedures. A training program may be essential if your employees are working with highly toxic substances or in dangerous situations.

DRAWBACKS TO CONTROLLING HAZARDS WITH SAFE WORK PRACTICES

While safe work practices are a necessity and can work very well, they are only as good as the management systems that support them. This is because they are susceptible to human error. Te controls first must be designed from a base of solid hazard analysis. They then must be accompanied by good worker training, reinforcement, and consistent and reasonable enforcement. Safe work practices should be used in conjunction with, and not as a substitute for, more effective or reliable engineering controls.

Safe Work Practices Training. Anticipate resistance when teaching new job practices and procedures to workers. If your employees have done a job long enough without special precautions, they are likely to feel unconcerned about hazards. It is essential that they understand why special work practices are needed. Therefore, training begins with a discussion of hazards. Your workers must be assisted in understanding that for an accident or injury to occur, two things must be present: a hazard and an employee. Remove the hazard and there will be no injury. Train the employee to follow proper work practices, and those safe work practices can significantly help the employee to avoid harm.

Just presenting training may not be sufficient. An employer has a responsibility to ensure that worker training has achieved its objective: that workers understand the hazards and know how to protect themselves. A supervisor can easily perform informal testing to check the results of training. This means stopping at an employee's work station and asking for an explanation of the hazards involved in the work and the employee's means of protection. If the training has been presented well and has been understood, each trained worker should be able to give a clear, comprehensive response.

Positive Reinforcement. Each supervisor should provide frequent reinforcement of work practices training. The informal testing described above serves not only to gauge training effectiveness but also to reinforce the desired behavior. Some worksites also provide special recognition for the use of safe work practices. Some supervisors periodically hand out "Thank you for working safely" cards that can be redeemed for a free cup of coffee or soft drink. Other supervisors periodically observe individual workers at their tasks and give oral and/or written feedback on what was done safely.

Award systems that recognize positive activities rather than absence of injuries are recommended. Award programs with prizes for hours worked without injury can put heavy pressure on workers not to report injuries.

Enforcement. Workers must realize that safe work practices are a requirement of employment and that unsafe practices will not be tolerated. It is necessary, therefore, that the employer have a disciplinary system that is implemented fairly and consistently. If no such system exists in your workplace, you would be wise to have employees assist in designing one. We discuss disciplinary systems in greater detail below.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

When exposure to hazards cannot be engineered completely out of normal operation or maintenance work, and when safe work practices cannot provide sufficient additional protection, a further method of control such as protective clothing or equipment should be used. These are collectively called personal protection equipment or PPE. The term PPE covers such items as face shields (whether worn by dentists or welders), steel-toed shoes and boots, safety glasses and goggles, hard hats, leather aprons and belly guards, metal-mesh gloves, forearm guards, respirators, and "space suits." Advertisement in safety and industrial hygiene magazines and exhibits at safety and industrial hygiene conferences suggest the full spectrum of available PPE.

PPE Drawbacks. The limitations of work practices in controlling hazards also apply to PPE. Employees should have training in the use, care, limitations of and need for PPE. (See Chapter 11.) They also need positive reinforcement and fair, consistent enforcement. (See discussion below.) A significant drawback is that some PPE is uncomfortable and puts additional stress on employees, thus making it unpleasant or difficult for them to work safely. This is particularly true where heat stress is already a factor in the work environment.

Bearing the Cost. OSHA standards require employers to provide PPE whenever the equipment is for use only on the site. If the PPE can be used away from the site the employer is not required to pay for it. OSHA has issued a letter of interpretation to clarify this issue.

Examples of personal protective equipment that would not normally be used away from the worksite include, but are not limited to, welding gloves, wire mesh gloves, respirators, hard hats, specialty glasses and goggles (such as those designed for laser or ultraviolet radiation protection, specialty foot protection (such as metatarsal shoes and linemen's shoes with built-in gaffs), face shields and rubber gloves, blankets, coverups, hot stocks and other live-line tools used by power generation workers.

Examples of protective equipment that is personal in nature and often used away from the worksite include non-specialty safety glasses, safety shoes and cold-weather outer wear of the type worn by construction workers. However, shoes or outerwear subject to contamination by carcinogens or other toxic or hazardous substances which cannot be safety worn off-site must be paid for by the employer.

Most employers provide the required PPE, with the exception of safety shoes and safety glasses. But even when employees must provide their own safety shoes, safety glasses or other PPE employers usually pay part of the cost.

ADMINISTRATIVE CONTROLS

Administrative controls include lengthened rest breaks, additional relief workers, exercise breaks to vary body motions, and rotation of workers through different jobs to reduce or "even out" exposure to hazards or to allow them to work part of the day without respirators or other burdensome PPE. They normally are used in conjunction with other controls that more directly prevent or control exposure to hazard.

Administrative controls are often employed to reduce ergonomic hazards. For example, employees in a meatpacking plant might rotate among several tasks to reduce accumulated stress on particular muscles and tendons. Administrative controls have also been used in

situations of extreme temperatures, to counteract the dangers of widely toxic substances, and to counteract the dangers of widely used toxic substances such as lead.

INTERIM PROTECTION

When a hazard is recognized the preferred correction or control cannot always be accomplished immediately. However, in virtually all situations interim measures can be taken to eliminate or reduce worker risk. These can range from taping down wires that pose a tripping hazard to actually shutting down an operation temporarily. The importance of taking these interim protective actions cannot be overemphasized. There is no way to predict when a hazard will cause serious harm and no justification to continue exposing workers unnecessarily to risk.

HAZARD CORRECTION TRACKING

An essential part of any day-to-day safety and health effort is the correction of hazards that occur in spite of your overall prevention and control program. Documenting these corrections is equally important, particularly for larger sites. Documentation is important because:

- It keeps management and the Safety Department or the person in charge of safety and health aware of the status of long-term correction items;
- It provides a record of what occurred, should the hazard reappear at a later date; and
- It provides timely and accurate information that can be supplied to an employee who reported the hazard.

Notations on the Report Form. Many companies use the form that documents the original discovery of a hazard to track the correction of the hazard. Inspection reports include notations about hazard correction alongside the information about the hazard. Employee reports of hazards and reports of accident/incident investigations also should provide space for notations about hazard correction. (Chapter 8, Appendix 9-3 has three sample forms to use for employee reports of hazards, and each of them has a line for completed corrections.)

When recording information about hazard correction, it is important to note all interim protective measures and to include the date of a completed action. Otherwise, you run the risk of intended corrections never actually being completed. This may not pose a problem if the hazard can be corrected in a short period of time. Someone probably will remember to see that the final correction occurs. There is always a danger, however, that the expected correction will “slip through the cracks.” This can happen when a part has to be ordered and time is needed for procurement or when interim, less that adequate measures become substitutes for preferred but possibly more costly or time-consuming actions.

Tracking by Committee. Some companies separate the tracking of hazard correction from the system that uncovered the hazard. Typically, either a central management safety committee or a joint employee-management committee will devote a part of each meeting to reviewing inspection reports, employee hazard reports and accident/incident reports. The committee will list in its minutes any remaining uncorrected hazards for continued tracking. The benefit of such a system is the high-level scrutiny applied to hazard correction tracking. The system can be cumbersome, however, especially when information must be transferred from the reports to the committee. There is the possibility of information being lost in transit or of incomplete and incorrect information being conveyed. This can be minimized by allowing the committee to review the original reports.

Tracking by Separate Form. Another way to track hazard correction is to transfer information from the original hazard reports to a separate hazard tracking report. Ideally, this system receives information on all uncorrected hazards and not just information from one to the avenues for uncovering hazards. Tracking by separate form is most effective when computerized. (Appendix 8-1 contains a form that can be used for this system). For small businesses that do not use written inspection reports or written employee reports of hazards, this system provides important documentation that otherwise might not exist.

The weakness in this system is much the same as for tracking by committee. There is always a possibility that incorrect or incomplete information will be transferred or that a correction which needs tracking will fail to be recorded.

RECOGNITION AND REWARD SYSTEMS

Rewarding safe behavior is at least as important as correcting and punishing unsafe actions. Positive feedback can be a powerful motivator. It is especially important to recognize self-initiated acts of safety or health protection -- those times when employees, of their own accord, act to protect themselves or others.

A reward system can be very simple and inexpensive: letters or certificates of appreciation, a few hours of paid leave, a special and convenient parking space for a month in the company parking lot, a small pin or tie tack. Evaluate your reward program periodically. If employees are showing signs of losing interest, give your program a fresh charge with new ideas.

Rewarding an employee for good safety and health behavior not only recognizes the employee; it also provides incentive to other workers. Public recognition is likely to be more important than monetary value when distributing one-time awards. Of course, taking safety and health performance into account when promoting employees or issuing bonuses is probably the most meaningful reward.

One type of reward program can backfire and should be avoided. Rewards based on the least number of accidents can do more harm than good. They tend to create pressure on employees to avoid reporting injuries and illnesses. For best results, emphasize the positive; reward employees who demonstrate constructive safety and health efforts.

ROLE OF DISCIPLINARY SYSTEMS IN THE WORKPLACE

The disciplinary system does not exist primarily to punish employees. Its purpose should be to control the work environment so that workers are protected and accidents are prevented. A disciplinary system helps ensure workplace safety and health by letting your employees know what you expect of them. It provides workers with opportunities to correct their behavior before an accident happens.

A disciplinary system is one of the keys to successfully implementing your safety and health program. It ensures that your rules and safe working practices are taken seriously by employees and are actually followed. It lets employees know how you expect them to operate in relation to the goals of your safety and health program. And it lays out the actions you will take if individuals do not meet your expectations.

A disciplinary system cannot work in a vacuum. Before you can hold your employees accountable for their actions, you first need to establish your safety and health policy and disciplinary rules. Then you need to develop safe operating procedures, train your employees on these procedures and supervise their actions. The worksheet in Appendix 8-2 will be useful for businesses planning to establish a disciplinary system for the first time.

Policy Statement. Employees need to know where you stand on safety and health and what you expect of them. They need a clear understanding of the rules and the consequences of breaking those rules. This is true in all areas of work, but it is especially important for worker safety and health. As part of the policy statement, or in an employee manual or booklet, you should have a written statement setting forth your disciplinary policy.

Employee Information and Training. It is important that employees understand the system and have a reference to turn to if they have any questions. Therefore, in addition to issuing a written statement of your disciplinary policy, you should draw up a list of what you consider major violations of company policy and less serious violations. This list should specify the disciplinary actions that will be taken for first, second or repeated offenses.

Training can reduce the need for disciplinary action. Instruct your employees in the importance of workplace safety and health, the need to develop safety habits, your operation's safe work practices and the hazards they control, and the standards of behavior that you expect. Be sure your employees understand the disciplinary system and the consequences of any deliberate, unacceptable behavior.

Supervision. Supervision includes both training and corrective action. Ongoing monitoring of your employees work and safety habits gives you and/or your supervisors the opportunity to correct any problems before serious situations develop.

In most cases, effective supervision means correcting a problem before issuing any punishment. Where the relationship between employees and their supervisors is open and interactive problems are discussed and solutions are mutually agreed upon. This type of relationship fosters a work environment where the need for disciplinary action is reduced. When such action is needed, the parties are more likely to perceive it as corrective than punitive.

Employee involvement. You may want to involve your employees in setting up or revising your disciplinary system. Employees who contribute their ideas to workplace rules and disciplinary actions are more likely to be knowledgeable about the system. They are more likely to understand the system is designed to protect them against the unsafe acts of others. Of course, at sites with collective bargaining agents you will need to involve employee representatives.

Employees should be encouraged to assist in the enforcement of rules and practices. The intent here is not to turn employees into spies and informants, but to encourage them to be their "brother's keeper" and to watch out for the safety and health of their colleagues. Many employers successfully have encouraged an atmosphere -- a company "culture" -- where employees readily speak up when they see an easily corrected problem; for example, a co-worker who needs reminded to be reminded to put on safety goggles.

Your employees deserve the opportunity to correct their own behavior problems. An effective disciplinary system is a two-way process. Once a problem is spotted, discuss it with the employee, who should be given at least one or two opportunities to change the behavior or correct the problem. Only after these discussions (and possibly some retraining) should disciplinary action be taken.

Appropriate Control Measures. Disciplinary actions need to be proportionate to the seriousness or hazardousness of the offense and the frequency of its occurrence. It is certainly inappropriate to issue only oral warnings to an employee who repeatedly removes a machine guard. Appendix 8-3 contains a list of suggested safety and health violations for inclusion in general workplace rules. Appendix 8-4 provides examples of disciplinary actions in three, four, and five-step disciplinary systems.

Disciplinary procedures should not be instituted without explanation. Be sure to provide feedback to the employee on what behavior is unacceptable, why the corrective action is necessary, and how the employee can prevent future violations and disciplinary action. In addition, take time to recognize an employee who improves or corrects the unacceptable behavior.

Consistent Enforcement. If your disciplinary system is to work well and be accepted by your workforce, you must assure your employees -- in word and deed -- that the system applies equally to everyone. This includes subjecting managers and supervisors to similar rules and similar or even more stringent disciplinary procedures.

Documentation. One key to ensuring fairness and consistency in a disciplinary system is keeping good records. It is in the best interest of both the employer and the employee to have written rules and disciplinary procedures. It is just as important to document instances of good or poor safety and health behavior, including discussions with the employee, and to place relevant information in the employee's personnel file.

Documentation serves a variety of purposes. It helps you to track the development of a problem, corrective actions and the impact of measures taken. It provides information which helps keep employees informed of problems that need correction. When you are evaluating the managerial and supervisory skills of your supervisors, it provides a useful record of how they handled problems.

If warnings, retraining and other corrective actions fail to achieve the desired effect, and if you decide to discharge an employee, documentation becomes even more critical. Conversely, you may want to consider an annual clearing of the personnel files of employees whose good overall safety records are marred by minor warnings.

PREVENTIVE MAINTENANCE

You may not associate preventive maintenance with your safety and health program. Nonetheless, good preventive maintenance plays a major role in ensuring that hazard controls continue to function effectively. Preventive maintenance also keeps new hazards from arising due to equipment malfunction.

Whenever systems are enclosed, the enclosure usually depends on the smooth functioning of pipes, valves, pressure releases, etc. Malfunctions of these parts of the enclosed system may result in hazards to workers. Ventilation systems that control hazards rely on the proper performance of duct work, fans, and filters. Many guards are electronic or electrically energized and require maintenance for continuing smooth operation. Equipment that is not hazardous under normal conditions may become so if it malfunctions. Clearly, preventive maintenance is a vital link in any safety and health program.

Scheduling. Preventive maintenance requires reliable scheduling of maintenance activity. The scheduling, in turn, depends on knowledge of what needs maintenance and how often. The whole point of preventive maintenance is to get the work done before repairs or replacement must be done.

Maintenance needs survey. A preventive maintenance program starts with a survey of maintenance needs at the worksite. Every piece of equipment or part of a system that needs maintenance, such as oiling, cleaning, testing, replacement of worn parts or checking, should be surveyed. You will need a complete list of all items to be maintained. If such a list does not exist at your worksite, you should require your maintenance supervisor to develop one. The survey should be repeated periodically and the list of items updated. The list should be revised whenever new equipment is placed in the worksite.

Maintenance timetable. Once the complete list is developed, a timetable must be established. For each item on your list, estimate the average length of time before the maintenance work becomes reactive rather than preventive. Plan to perform the maintenance before that average time. (Maintenance should be performed at least as often as recommended by the manufacturer). Review maintenance documents periodically to see how much reactive maintenance (repair or replacement of defective parts after failure) has been done. Then make new estimates of average time, and adjust your maintenance timetable accordingly.

Posted or computerized schedules. Make sure the preventive maintenance schedule will help your maintenance staff plan its work. A well communicated schedule also will help to ensure the maintenance department's accountability for performing the work on time. Select a method of communication that works well for your employees.

Maintenance Documentation. Preventive maintenance can be a complicated matrix of timing and activity. But keeping track of completed maintenance tasks can be as simple as adding a date and initials to the posted work schedule. Some employers use their computer system to keep track of completed maintenance activity.

Documentation can help identify and reward employees whose efforts have prevented costly repairs and accidents/incidents. It also can be instrumental in your effort to require accountability of employees responsible for maintenance.

EMERGENCY PREPARATION

This topic is more thoroughly covered by OSHA publication "How to Prepare for Workplace Emergencies." Here we will consider only the most important general points.

The Nature of Emergencies. During emergencies, hazards appear that normally are not found in the workplace. These hazards may be the result of natural causes such as earthquakes, tornadoes, hurricanes, floods or ice storms. Events caused by humans and beyond your control may create hazards; for example, train or plane accidents, terrorist activities, or occurrences at nearby worksites that affect your site. Finally, emergencies may occur within your own systems due to unforeseen combinations of events or the failure of one or more hazard control systems.

Emergencies, by their nature, are not part of the expected, everyday routine. They may never occur, but if they do their cost in terms of both dollar losses and human suffering can be enormous. Your job is to become aware of possible emergencies – not merely probably events – and to plan the best way to control or prevent the hazards they present.

Survey of Possible Emergencies. Just because a particular emergency has never occurred does not mean that it never will. Therefore, your emergency preparation should begin with a survey of all possible emergency occurrences by the general categories below, taking into consideration the unique characteristics of your worksite and its location.

Natural disaster. Review each type of natural disaster that has occurred in your geographical area and consult experts on the chances of other types of natural disasters happening.

Human errors or deliberately caused disasters beyond the control of your worksite. Consider the environment of your worksite. Are you near an airport or on an airport's landing/takeoff pattern? Is there a train track used to carry products other than those that you ship or receive? If so, is it near enough so that an accident involving release of toxic materials could impact your worksite?

Are there chemicals or other dangerous sites in your neighborhood that could have internal emergencies that might affect your worksite? Have there been terrorist activities against other plants belonging to your company? Against plants involved in similar processes or products?

Hazard control failures at your worksite. Ask yourself, what are the worst things that could possibly happen as a result of conditions here? Every worksite has some potential for fire. Some have much greater potential than others.

Emergency Planning After listing all possible emergencies, you must plan actions to reduce their potential impact on your workers' safety and health. Some actions will be appropriate in all emergency situations. But the measures required by some types of emergencies may differ from or even contradict those needed in other emergency scenarios. Plan what first aid or medical response is needed and where that response will come from. If you are relying on

outside medical or emergency response organizations, establish communications with them and plan together for emergencies. If possible, have these outside resources participate in your drills.

Employee Information and Training. Your employees need to be informed of the emergency plans that require their participation. Each employee needs to know precisely what is expected in each type of emergency.

For most emergencies, employees should be drilled in the actions you expect them to take. You want their responses to become second nature, so that they will be able to protect themselves and others regardless of the stress of the moment. Fire and evacuation drills should be held annually. For other types of emergencies, such as tornadoes or earthquakes, drills should follow a predetermined schedule based on the frequency and/or probability of the event.

MEDICAL PROGRAMS

Medical programs provide occupational health care, both onsite and nearby. This care consists of approaches to both identifying health problems that may be work-related and responding to injuries and illnesses that occur. The size and complexity of a medical program will depend on the size of the worksite, its location in relation to health care provider organizations and the nature of the hazards at the worksite. Medical programs are covered in detail in Chapter 10, so only summary information is offered here.

You must always be prepared to offer first aid at your worksite. In fact, this is required by OSHA standard [9 CFR 1910.151(b)] for worksites that are not close to medical facilities. We strongly advise that both first aid and CPR assistance be available on every shift at your worksite regardless of distance to medical facilities.

Medical programs consist of everything from a basic first aid and CPR response to sophisticated approaches for the diagnosis and resolution of ergonomic problems. The nature and extent of your medical program will depend on a number of factors. Small business employers can contact the OSHA-funded, state-run consultation service for assistance in deciding what type of medical program meets their site's needs. If use of nearby medical facilities appears to be the best arrangement, be sure to meet with representatives of that facility to discuss your medical needs.

Whatever medical program you decide on, it is important to use medical specialists with occupational health/medical training. Not every nurse or doctor is trained to understand the relationships between the workplace, the work and certain medical symptoms.

SUMMARY

You should approach each category of workplace hazard with the intention of totally preventing it. If total prevention is not feasible, you should control the hazard as completely as possible through work and equipment design. To the extent that potential exposure exists despite the designed controls, then you should use safety and health rules, work practices and PPE to control that exposure. Finally, you may choose to employ administrative controls to further reduce levels of individual exposure.

To complement these hazard controls, the following components are also necessary: good systems of preventive maintenance, hazard correction tracking, fair and consistent enforcement of rules, work practices, PPE, a solid system for responding to unexpected emergencies, and a good medical program that helps identify hazards and minimize harm when injuries and work-related illnesses occur.

These are the basic components of a hazard prevention and control program. With these measures, you can provide your employees with comprehensive protection from occupational hazards.

APPENDIX 8-1

SAMPLE FORM FOR TRACKING HAZARD CORRECTIONS

Instruction: Under the column headed “System,” note how the hazard was found. Enter Insp. For inspection, ERH for employee report of hazard or Acc. For accident/incident investigation.

Under the column headed “Hazard Description,” take as many lines as you need to describe the hazard. In the third column, provide the name of the person who has been assigned correction responsibility. In the fourth column, list any interim action to correct the hazard and the date performed. In the last column, enter the completed corrective action and the date that final correction was made.

TRACKING HAZARD CORRECTIONS

SYSTEM	HAZARD DESCRIPTION	ASSIGNED TO:	DATE INTERIM ACTION	DATE ACTION COMPLETED

APPENDIX 8-2

DISCIPLINARY SYSTEM WORKSHEET

The nature and severity of disciplinary action should be appropriate for the seriousness and frequency of the violation . Below are a series of questions designed to help you develop a disciplinary system that best meets the needs of your workplace. You already may have addressed the first two areas when you developed safe work practices for various jobs. If you have not yet developed these practices, it makes sense to do so before developing a disciplinary system. Other workplace problems, such as attendance and attitude, are equally important but are not addressed here.

- Operations. What key operation(s) occur at your workplace? What equipment is used: By whom? What materials are used, and by whom? Are there any hazards associated with the use of the equipment or the materials?

- Practices and Procedures. What are the key types of jobs at your workplace? What do most people do in the course of their work? What is the most efficient way for them to perform their jobs? What is the safest way for them to perform their jobs? (Note: You will need to perform a job hazard analysis to properly answer this.)

- Problems. What would happen if a job or a procedure was not done safely? Exactly what would happen if an employee performed in an unsafe or unhealthful manner? What would happen if all employees did the same thing? How serious would the consequences be? Would the unsafe action or behavior affect just one employee or all employees?

- Correction. For each type of safety and health violation you have identified, what kind of corrective action seems appropriate? What would you do for a second offense or for repeated violations of the same rule? Should warnings be oral or written? How long a suspension is warranted for what type of violation? Are there any actions that should automatically result in termination?

For this last stage in developing a disciplinary system you may find it helpful to develop a grid like the one on the next page to identify corrective actions for different kinds of violations and repetitions. In the example below, a few types of safety problems are listed on the left and their frequency across the top. Fill in each box with the type of corrective action that you consider appropriate. Examples include oral warning, written warning, re-instruction, suspension, and termination.

VIOLATION	FIRST OFFENSE	SECOND OFFENSE	REPEATED VIOLATION
Unsafe work habits			
Refusal to follow safety instructions			
Unsafe actions that jeopardize self and others			

APPENDIX 8-3

DEVELOPING GENERAL WORKPLACE SAFETY AND HEALTH RULES

It is useful to make a list of the kinds of violations that are considered major or serious and a second list of other types of behavior that, while not as serious, are still not acceptable. The following suggested rules can be a starting point.

Major Offenses:

- Failure to follow rules regarding use of company equipment or materials
- Horseplay in work areas or otherwise creating unsafe conditions
- Tampering with machine safeguards or removing machine tags or locks
- Not wearing required PPE
- Provoking or engaging in an act of violence against another person on company property
- Using or being under the influence of alcohol or illegal drugs on the job
- Major traffic violations while using a company vehicle
- Other major violations of company rules or policies

General Offenses:

- Minor traffic violations while using company vehicles
- Creating unsafe or unsanitary conditions or poor housekeeping habits
- Threatening an act of violence against another person while on company properly
- Misrepresentation of facts or falsification of company records
- Unauthorized use of company property
- Other violations of company policy and rules

Link each type of offense to a structured procedure for corrective action. Your goal is to make sure that the corrective action is appropriate to the seriousness of the violation; that employees are given the opportunity to correct their own behavior; and that the system is workable, and consequently, used and useful.

Written Warning	No safety glasses Horseplay Unsafe work habits Violation of other safety or health rule or regulation
Suspension (8 hours without pay)	Three or more safety or health violations of the same type General overall record of unsafe practices Refusal to follow safety and health guidelines or instructions
Termination	Excessive and repeated safety and/or health violations Purposely ignoring safety and/or health rules Unsafe actions that seriously jeopardize the safety or health of others General disregard for safety and health of self and others

APPENDIX 8-4

EXAMPLES OF SEVERAL-STEP DISCIPLINARY SYSTEMS

Most disciplinary systems use corrective procedures that involve three, four or five steps. These are described briefly below.

THREE STEP SYSTEM

First Violation	Written warning; copies to employee and employee's file.
Second Violation	Written warning; suspension without pay for ½ or full day.
Third Violation	Written report for file and immediate termination.

FOUR STEP SYSTEM

First Violation	Oral warning; notation for personnel file.
Second Violation	Written warning; copy for file or Personnel Office.
Third Violation	Written warning; 1 day suspension without pay.
Fourth Violation	Written warning and 1 week suspension or termination if warranted.

FIVE STEP SYSTEM

First Violation	Instruction/discussion concerning violation, proper procedures and the hazards they control; notation for supervisor's file.
Second Violation	Re-instruction with notation in the employee's personnel file.
Third Violation	Written warning describing the violation and actions that will be taken if it recurs.
Fourth Violation	Final warning; may include suspension.
Fifth Violation	Discharge

NOTE: The use of these corrective procedures obviously will vary with the nature of the problem and the frequency with which it occurs. Violations of company rules generally are considered more serious than other employee behavior problems but all require correction. Keep in mind -- and tell your employees -- that your primary goal is to control unsafe acts and conditions in order to prevent accidents.